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Case Control Study

Elevated serum growth differentiation factor 15 in multiple system atrophy patients: A case control study

Yue T *et al.* Elevated serum GDF15 in MSA

Tao Yue, Hui Lu, Xiao-Mei Yao, Xia Du, Ling-Ling Wang, Dan-Dan Guo, Yi-Ming Liu

Abstract

BACKGROUND

Multiple system atrophy (MSA) is a serious progressive neurodegeneration disease, while the early diagnosis is very difficult, and the diagnostic biomarkers are limited. Growth differentiation factor 15 (GDF15) is involved in the differentiation and progression of central nervous system, and is

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Multiple system atrophy (MSA) is a rare sporadic progressive neurodegenerative disorder. MSA risk factors are poorly known. The objectives of this **case-control study** were to **study** environmental ...

Multiple system atrophy: cellular and molecular pathology

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1187133>

Multiple system atrophy is an adult onset neurodegenerative disease, featuring parkinsonism, ataxia, and autonomic failure, in any combination. The condition is relentlessly progressive and responds poorly to treatment. Death occurs on average six to seven years after the onset of symptoms.

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cytokine/chemokine/**growth factor** profiles in MSA-C and compared them with those in hereditary **spinocerebellar ataxia** (SCA). Methods: We collected clinical data and CSF from 20 **MSA-C patients**, 12 hereditary SCA patients, and 15 patients with other non-inflammatory neurological diseases (OND), and measured 27 **cytokines/chemokines/growth factors** using a

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Neuroinflammation in Multiple System Atrophy: Response to ...

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Nov 12, 2015 · **Multiple system atrophy** (MSA) is a progressive neurodegenerative disease presenting with combinations of autonomic dysfunction, parkinsonism, cerebellar ataxia and/or pyramidal signs. Oligodendroglial cytoplasmic inclusions (GCIs) rich in α-synuclein (α-syn) constitute the disease hallmark, accompanied by neuronal loss and activation of glial ...

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Major histocompatibility complex (MHC) class II, CD45 and CD3 reactivity in the dorsomedial prefrontal cortex of **Parkinson's Disease** (PD), and **Multiple System Atrophy** (MSA) patients as well as normal controls (NCs). Formalin-fixed paraffin-embedded tissue samples were investigated using immunohistochemistry. A: Example of MHC class II + cell (arrow).

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Author: Rasmus Rydbirk, Betina Elfving, Mille Dahl ...

Publish Year: 2017

Clinical correlates of serum insulin-like growth factor-1 ...

<https://www.sciencedirect.com/science/article/pii/S1353802013003970>

Recently, increased **serum** insulin-like **growth factor-1** (IGF-1) levels have been reported in **patients** with Parkinson's disease (PD) and **multiple system atrophy** (MSA). Objective To assess a correlation between the **serum** IGF-1 levels and clinical background factors in **patients** with PD and related disorders such as MSA and progressive supranuclear ...

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Author: Ayaka Numao, Keisuke Suzuki, Masayuki M...

Publish Year: 2014

The pathogenesis linked to coenzyme Q10 insufficiency in ...

<https://www.nature.com/articles/s41598-018-32573-1>

Sep 21, 2018 · The pathogenesis linked to coenzyme Q10 insufficiency in iPSC-derived neurons from **patients with multiple-system atrophy.** ... in **serum-free growth** medium ... **a case ??? control study** ...

Increased serum insulin-like growth factor 1 in early ...

<https://europepmc.org/article/MED/20176597> ▾

Feb 22, 2010 · Clinical correlates of serum insulin-like growth factor-1 in patients with Parkinson's disease, multiple system atrophy and progressive supranuclear palsy. Numao A , Suzuki K , Miyamoto M , Miyamoto T , Hirata K

Serum Insulin-Like Growth Factor-1 in Patients with De ...

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4684362>

Insulin-like growth factor-1 (IGF-1) is reported to be neuroprotective in the setting of Parkinson's disease (PD), and there is increasing interest in the possible association of serum IGF-1 levels with PD patients, but with conflicting results.

Lipid dysfunction and pathogenesis of multiple system atrophy

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3922275>

Epidemiology of **multiple system atrophy**: a prevalence and pilot risk **factor study** in Aquitaine, France. Neuroepidemiology. 2004; 2 (4):201–208. doi: 10.1159/000078506. Seo JH, Yong SW, Song SK, Lee JE, Sohn YH, Lee PH. **A case–control study** of **multiple system atrophy** in Korean **patients**. Mov Disord.

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Nov 12, 2015 · **Multiple System Atrophy** (MSA) is a complex progressive neurodegenerative disease which affects 3.4–4.9 cases/100,000 with 0.6–0.7/100,000 new cases each year. It has no significant gender bias with disease onset typically over the age of 60 and a mean survival of ~7.9 years following diagnosis (Watanabe et al., 2002 ; Wenning et al., 2013 ...

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<https://www.nature.com/articles/s41598-018-32573-1>

Sep 21, 2018 · **Multiple-system atrophy** (MSA) is a neurodegenerative disease characterized by autonomic failure in addition to various combinations of parkinsonism, cerebellar ataxia, ...

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Author: Fumiko Kusunoki Nakamoto, Satoshi Ok...

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